

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and in light of the following remarks. This is in response to the Office Action mailed November 10, 2009 ("the Office Action"). By this Amendment, Applicant has amended claims 55 and 56, and canceled claim 57 without prejudice or disclaimer. Support for the amended claims can be found in the originally filed application, including the as-filed specification, claims, and drawings. No new matter had been added. Claims 30-38 and 41-56 are currently pending.

I. Claim Rejections - 35 U.S.C. § 112

In the Office Action, claims 55-57 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. In particular, the Examiner alleges the recitation of the core barrel as "elongate in shape" (claim 55, lines 3-4; claim 56, lines 3-4) finds insufficient support in the original specification including the original claims, and hence constitutes new matter." Office Action, p. 4 (emphasis in original). While not agreeing with the Examiner, but rather to advance prosecution, Applicant has removed such language from independent claims 55 and 56, and canceled claim 57 thus rendering the rejection moot. Further, Applicant has amended claims 55 and 56 to recite "the core barrel including a circular cylindrical side wall having an axis which extends vertically, the core barrel further including a top and a bottom." As conceded by the Examiner, these features are "supported in the specification." Office Action, p. 4. In particular, support for this recitation may be found in at least the drawings and on page 8, lines 7 and 8 of the specification. Therefore,

Applicant respectfully requests withdrawal of the 35 U.S.C. § 112, first paragraph, rejection of claims 55 and 56.

In the Office Action, claim 55 was rejected under 35 U.S.C. § 112, second paragraph, as allegedly providing insufficient antecedent basis for the term "bearing surfaces." Office Action, p. 4. By this amendment Applicant has amended claim 55 so as to provide proper antecedent support. Support for this amendment can may be found in at least the drawings and on page 10, line 12 – 14 of the specification. Therefore, Applicant respectfully requests withdrawal of the 35 U.S.C. § 112, second paragraph, rejection of claim 55.

In the Office Action, claims 56-57 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. The Examiner asserts that the term "resiliently deformable" . . . is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in that art would not be reasonably apprised of the scope of the invention." Office Action, p. 4. Applicant respectfully disagrees. However, in order to advance prosecution, Applicant has amended claim 56 to remove the term "resiliently deformable," and has canceled claim 57. Therefore, Applicant respectfully requests withdrawal of the 35 U.S.C. § 112, second paragraph, rejection of claim 56.

II. Claim Rejections - 35 U.S.C. § 103(a)

In the Office Action, claims 55-56 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over British Patent No. GB 889,758 to Williams et al. ("Williams"), in view of U.S. Patent No. 4,008,757 to Weatherford Jr. ("Weatherford"),

and further in view of U.S. Patent No. 5,772,420 to Holmes ("Holmes"). Applicant respectfully traverses these rejections.

A proper *prima facie* case of obviousness requires, *inter alia*, that the prior art references when combined must teach or suggest all the claim limitations. See M.P.E.P. § 2142. Williams, Weatherford, and Holmes, whether taken alone or in combination, do not disclose all of the elements of amended independent claims 55 and 56

Specifically, independent claim 55 recites, *inter alia*,

a single vertical support for supporting the weight of the core barrel, the vertical support including separate upper and lower support members which are connected respectively to the bottom of the core barrel and the reactor pressure vessel between which vertical loads are transmitted the upper and lower support members being centrally positioned about the axis and displaceable relative to one another under normal operation of the reactor.

Support for this amendment can be found in at least the drawings as well as page 9, lines 1-20, and page 12, line 30 - page 13, line 4. In contrast, the alleged vertical support of Williams, element 14, fails to include separate upper and lower support members. The Office Action alleges that Williams discloses "upper and lower support members connected to the core barrel 12 and the reactor pressure vessel 11, resp. (two ends of 14 are connected, one upper portion of 14 to the core barrel 12, the other lower portion to the reactor pressure vessel 11: see Figure 1)." Office Action, p. 5 (*sic*).

However, as conceded by the Examiner's interpretation noted above, Williams fails to disclose separate upper and lower support members. Rather, the Examiner relies on upper and lower portions of the same element in Williams. Weatherford and Holmes fail to cure the deficiency of Williams with respect to the above noted features. For at least

this reason, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 55.

Further, independent claim 55 recites, *inter alia*,

a roller element having a circular cylindrical body and being sandwiched between oppositely disposed bearing surfaces of the inner and outer lateral support members, wherein the bearing surfaces of the inner and outer upper lateral support members face radially outwardly and inwardly, respectively, relative to the axis and are each inclined both upwardly and outwardly relative to the axis of the core barrel thereby permitting the inner lateral support members to be displaced upwardly and radially outwardly relative to the outer upper lateral support members while maintaining the support surfaces in contact with the roller to compensate for thermal expansion of the core barrel.

The claimed features of the bearing surfaces are advantageous at least due to the fact that as the point on the core barrel to which the inner lateral support member is attached moves upwardly and radially outwardly as a result of thermal expansion, the spacing between the bearing surfaces remains substantially constant so that the roller element is retained in contact with the opposed bearing surfaces. The Office Action alleges that the

inner and outer upper lateral support parts are met by elements 15 and 17 [of Williams], of which bearing surfaces (interpreted as the surfaces of 15 and 17 respectively that face one another: see Figure 1) are inclined upwardly and outwardly (see Figure 1) relative to the axis of the core barrel. . . . The bearing surface of 15 extends outwardly and the bearing surface of 17 extends upward.

Office Action, pp. 8-9. However, as conceded by the Examiner's interpretation noted above, Williams does not disclose that the alleged bearing surface are "each inclined both upwardly and outwardly relative to the axis of the core barrel." Rather, at best, the alleged bearing surface element 15 of Williams extends only outwardly while the alleged bearing surface of element 17 extends only upwardly. Further, the alleged bearing

surfaces of elements 15 and 17 of Williams are not "oppositely disposed" bearing surfaces, nor do these alleged elements "of the inner and outer upper lateral support members face radially outwardly and inwardly, respectively, relative to the axis."

Weatherford and Holmes fail to cure the deficiency of Williams with respect to the above noted features. For at least this reason, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 55.

Independent claim 56 recites, *inter alia*,

lateral support means . . . including a plurality of circumferentially spaced upper lateral supports . . . each of which includes a set of inner and outer lateral support members connected to the core barrel at or towards the top of the core barrel and the reactor pressure vessel, respectively, each outer upper lateral support member being mounted on a support structure within the pressure vessel, said support structure configured to deflect from an original configuration upon the application of a force and return to the original configuration upon removal of the force, the support structure including a pair of support posts connected to an upper support ring secured to the reactor pressure vessel at spaced apart positions and a guide beam configured to elastically deform.

The above claimed support arrangement is advantageous in that it permits displacement of the core barrel when subjected to seismic events while reducing the shock transmitted thereto. In addition, by virtue of the resilient nature of the guide beams, the core barrel is returned to its operative or centered position after a seismic event.

The Office Action alleges "[s]aid resiliently deformable support is met by U-shaped guide member 20 [of Williams], on which [element] 17 is lifted or placed on. Resilience and deformability follow from the abutting biological shield 21 (page 1, line 65 second col. 2)." Office Action, p. 9. However, element 20 of Williams is located outside pressure vessel 11. Further, Williams is silent as to

whether element 20 may be "configured to deflect from an original configuration upon the application of a force and return to the original configuration upon removal of the force," as recited in independent claim 56. Weatherford and Holmes fail to cure the deficiency of Williams with respect to the above noted features. For at least this reason, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 56.

III. Conclusion

The Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

In discussing the specification and claims in this Amendment, it is to be understood that Applicant is in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification and/or shown in the drawings. Rather, Applicant is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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